CLAIMS

What is claimed is:

1. A method for transmitting a plurality of short series of bursts of ultrasonic energy pulses from a probe terminated by an array of transducer elements; and modulating an amount of energy transmitted by each burst from transducer element to transducer element across the probe by varying the width of each energy pulse or varying the number of pulses per burst or varying both the width of each pulse and the number of pulses per burst while keeping each pulse amplitude constant from pulse to pulse across the probe, the modulating being sufficient to produce an operationally significant reduction of harmonics in the modulated signal.

2. The method of Claim 1 in which the amount of energy transmitted by each burst is less at the array's edge than at the array's center.

3. The method of Claim 2 in which the amount of energy transmitted by each burst is progressively reduced from a maximum at the array's center to a minimum at the array's edge.

4. The method of Claim 2 in which the array is a one dimensional array or a two dimensional array.

5. An apparatus for transmitting a plurality of short series of bursts of ultrasonic energy pulses from a probe terminated by a one dimensional or a two dimensional array of transducer elements and modulating an amount of energy transmitted by each burst from

transducer element to transducer element across the probe, comprising control circuitry incorporating digital logic adapted for varying the width of each pulse or the number of pulses per burst or both the width of each pulse and the number of pulses per burst from burst to burst across the probe, the modulating being sufficient to produce an operationally significant reduction of harmonics in the modulated signal.

6. An apparatus of Claim 5 in which the amount of energy transmitted by each burst is less at the array's edge than at the array's center.

7. An apparatus of Claim 6 in which the amount of energy transmitted by each burst is progressively reduced from a maximum at the array's center to a minimum at the array's edge.